

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)	
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Alok SHARMA)	Group Art Unit: 2426
)	
Application No.: 09/800,397)	Examiner: J. Zhong
)	
Filed: March 5, 2001)	
)	
For: TRANSCEIVER CHANNEL BANK)	
WITH REDUCED CONNECTOR)	
DENSITY)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant hereby requests that a panel of Examiners formally review the legal and factual basis of the rejections in the above-identified application prior to the filing of an Appeal Brief. Applicant asserts that the outstanding rejections are clearly improper and based upon errors in fact.

Claims 1, 3-10, 12-17, and 22-40 are pending. Claims 2, 11, and 18-21 have been previously canceled without prejudice or disclaimer. Claims 1, 3-4, 16-17, 22-26, and 37-40 stand rejected under 35 U.S.C. § 103(a) as unpatentable over BARHAM et al. (U.S. Patent No. 6,721,371) in view of YASUDA et al. (U.S. Patent No. 6,466,913) and PROAKIS et al. ("Digital Signal Processing: Principles, Algorithms, and Applications" by Proakis and Manolakis, ISBN 0133737624, 1996); claims 8 and 36 stand rejected under 35 U.S.C. § 103(a) as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., and DUNLOP et al. (U.S. Patent No. 6,721,872); claims 5-7, 13, 27-29, and 33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al. (U.S. Patent No. 6,650,624); claims 14, 15, 34, and 35 stand rejected under 35 U.S.C. § 103(a) as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., and PEYROVIAN (U.S. Patent No. 5,768,682); and claims 9-10, 12, and 30-32 stand rejected under 35 U.S.C. § 103(a) as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., and Applicant's allegedly admitted prior art. Applicant submits that the Examiner's rejections are improper and based on inconsistencies.

***EXAMINER'S REJECTION UNDER 35 U.S.C. § 103(a)
BASED ON BARHAM ET AL., YASUDA ET AL., AND PROAKIS ET AL.***

Claims 1, 3, 4, 16, 17, 22-26, and 36-40 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BARHAM et al. in view of YASUDA et al, and in view of PROAKIS et al. Applicant respectfully traverses this rejection and submits that the Examiner's rejection is *improper*.

For instance, BARHAM et al., YASUDA et al., and PROAKIS et al. do not disclose or suggest **subjecting retrieved filter coefficients to a bandpass transformation corresponding to a first center frequency**, as recited in claim 1. The Examiner concedes that BARHAM et al. and YASUDA et al. do not disclose the above feature, and relies on pp. 698-700 of PROAKIS et al. for allegedly disclosing "a bandpass transformation of the FIR filter's coefficients" (Office Action, p. 5). Applicant respectfully submits that PROAKIS et al. does not disclose the above feature of claim 1.

At p. 698, PROAKIS et al. discloses that "frequency transformations can be performed on a digital lowpass filter to convert it to either a bandpass, bandstop, or highpass filter." At p. 700, PROAKIS et al. provides an example of converting a "single-pole lowpass Butterworth filter. . . into a bandpass filter."

Applicant respectfully submits that converting a lowpass filter into, e.g., a bandpass filter, as disclosed by PROAKIS et al., does not disclose or suggest subjecting a retrieved filter coefficient to a bandpass transformation. Converting one type of filter to another type of filter, as disclosed by PROAKIS et al., is a different concept with different results than subjecting a filter coefficient to a bandpass transformation, as recited in claim 1. Therefore, PROAKIS et al. cannot be reasonably relied upon for disclosing or suggesting subjecting retrieved filter coefficients to a bandpass transformation corresponding to a first center frequency, as recited in claim 1.

Due to at least these factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 as unpatentable over BARHAM et al., YASUDA et al., and PROAKIS et al. Claims 3, 4, 16, 17, 22, and 23 depend from claim 1. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3, 4, 16, 17, 22, and 23 for at least the reasons provided above with respect to claim 1.

Independent claim 24 recites features similar to (yet possibly of different scope than) features described above with respect to claim 1. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 24 for at least reasons similar to the reasons provided above with respect to claim 1. Claims 25, 26, and 37-40 depend from claim 24. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 25, 26, and 37-40 for at least the reasons provided above with respect to claim 24.

***EXAMINER'S REJECTION UNDER 35 U.S.C. § 103(a)
BASED ON BARHAM ET AL., YASUDA ET AL., PROAKIS ET AL., AND DUNLOP ET AL.***

Claims 8 and 36 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BARHAM et al. in view of YASUDA et al, further in view of PROAKIS et al., and further in view

of DUNLOP et al. Applicant respectfully traverses this rejection and submits that the Examiner's rejection is *improper*.

Claim 8 depends from claim 1, and claim 36 depends from claim 24. Without acquiescing in the rejection of claims 8 and 36, Applicant submits that the disclosure of DUNLOP et al. does not overcome the deficiencies in the disclosures of BARHAM et al., YASUDA et al., and PROAKIS et al. set forth above with respect to claims 1 and 24. Therefore, claims 8 and 36 are patentable over BARHAM et al., YASUDA et al., PROAKIS et al., and DUNLOP et al., whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claims 1 and 24, respectively. Due to at least these factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 8 and 36 as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., and DUNLOP et al.

***EXAMINER'S REJECTION UNDER 35 U.S.C. § 103(a)
BASED ON BARHAM ET AL., YASUDA ET AL., PROAKIS ET AL., AND QUIGLEY ET AL.***

Claims 5-7, 13, 27-29, and 33 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BARHAM et al. in view of YASUDA et al., further in view of PROAKIS et al., and further in view of QUIGLEY et al. Applicant respectfully traverses this rejection and submits that the Examiner's rejection is *improper*.

Claims 5-7 and 13 depend from claim 1, and claims 27-29 and 33 depend from claim 24. Without acquiescing in the rejection of claims 5-7, 13, 27-29, and 33, Applicant submits that the disclosure of QUIGLEY et al. does not remedy the deficiencies in the disclosures of BARHAM et al., YASUDA et al., and PROAKIS et al. set forth above with respect to claims 1 and 24. Therefore, claims 5-7, 13, 27-29, and 33 are patentable over BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claims 1 and 24, respectively. Due to at least these factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 5-7, 13, 27-29, and 33 as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al.

Moreover, these dependent claims are patentable for reasons of their own. For example, claim 7 recites that **the ratio of the number of upstream channels demodulated by a cable modem termination system (CMTS) channel bank to a number of upstream input connectors of the CMTS channel bank is M, where M is 16**. The Examiner concedes that BARHAM et al. and YASUDA et al. do not disclose the above feature, and appears to generally allege that the above

features are a design choice (Office Action, p. 12). However, the Examiner has not provided a citation to any reference to support the Examiner's allegation, or adequately explained how/why one would have been motivated to alter BARHAM et al.'s system to include this feature. In this respect, Applicant respectfully submits that the Examiner's allegation is improper.

Nevertheless, Applicant respectfully submits that none of the cited references disclose that the ratio of the number of upstream channels demodulated by a CMTS channel bank to a number of upstream input connectors of the CMTS channel bank is 16, as recited in claim 7. Moreover, none of the cited references discloses that such a ratio could be possible.

Furthermore, Applicant respectfully submits that this claimed feature is not merely a design choice, as alleged by the Examiner. Instead, the claimed feature is a technical advantage provided by, and described in, Applicant's Specification (*see, e.g.*, p. 10, line 21-p. 11, line 2; p. 14, line 16-p. 15, line 10).

Due to at least these additional factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 7 as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al.

***EXAMINER'S REJECTION UNDER 35 U.S.C. § 103(a) BASED ON
BARHAM ET AL., YASUDA ET AL., PROAKIS ET AL., QUIGLEY ET AL., AND PEYROVIAN***

Claims 14, 15, 34, and 35 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BARHAM et al. in view of YASUDA et al., in further view of PROAKIS et al., in further view of QUIGLEY, et al., and further in view of PEYROVIAN. Applicant respectfully traverses this rejection and submits that the Examiner's rejection is *improper*.

Claims 14 and 15 depend from claim 5, and claims 34 and 35 depend from claim 27. Without acquiescing in the rejection of claims 14, 15, 34, and 35, Applicant submits that the disclosure of PEYROVIAN does not remedy the deficiencies in the disclosures of BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al. set forth above with respect to claims 5 and 27. Therefore, claims 14, 15, 34, and 35 are patentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., and PEYROVIAN, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claims 5 and 27, respectively. Due to at least these factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 14, 15, 34, and 35 as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., and PEYROVIAN.

EXAMINER'S REJECTION UNDER 35 U.S.C. § 103(a)

***BASED ON BARHAM ET AL., YASUDA ET AL., PROAKIS ET AL.,
QUIGLEY ET AL., AND APPLICANT'S ALLEGEDLY ADMITTED PRIOR ART***

Claims 9, 10, 12, and 30-32 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over BARHAM et al. in view of YASUDA et al., in further view of PROAKIS et al., in further view of QUIGLEY, et al., and further in view of PEYROVIAN. Applicant respectfully traverses this rejection and submits that the Examiner's rejection is *improper*.

Claims 9, 10, and 12 depend from claim 5, and claims 30-32 depend from claim 27. Without acquiescing in the rejection of claims 9, 10, 12, and 30-32, Applicant respectfully submits that Applicant's Fig. 17(A) does not remedy the deficiencies in the disclosures of BARHAM et al., YASUDA et al., PROAKIS et al., and QUIGLEY et al. set forth above with respect to claims 5 and 27. Therefore, Applicant submits that claims 9, 10, 12, and 30-32 are patentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., and Applicant's Fig. 17(A), whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claims 5 and 27, respectively. Due to at least these factual deficiencies, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 9, 10, 12, and 30-32 as unpatentable over BARHAM et al., YASUDA et al., PROAKIS et al., QUIGLEY et al., PEYROVIAN, and Applicant's Fig. 17(A).

CONCLUSION

In view of the foregoing remarks, Applicant submits that clear deficiencies exist with respect to the rejections of claims 1, 3-4, 16-17, 22-26, and 37-40. Therefore, Applicant respectfully requests withdrawal of the outstanding rejections and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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